



Tier 1 Main Break and Boil Advisory Guidance for Water Systems

Iowa Administrative Code 567-42.1(2) lists the violations and situations that require Tier 1 public notification. Situations include treatment or distribution system failure that “significantly increases the potential for drinking water contamination” and other situations “with significant potential to have serious adverse effects on human health as a result of short-term exposure, as determined by the department either in its rules or on a case-by-case basis.” The purpose is to protect public health.

Tier I main breaks and pressure loss situations

A main break or pressure loss situation that may be a tier 1 situation include any of the following:

- No or low pressure in the distribution system and not contained (time or geographical area)
- Situations where a tower or storage facility has been emptied
- Located near a contaminant source, such as near a river crossing, feedlot, co-located with a sewer line break, etc.
- Located in an area with significant elevation differences
- Confirmed backflow situation
- Located in an area with the potential to create a high hazard backflow incident
- A high hazard business is located in affected area (boiler, funeral home, industry, etc.)
- The minimum disinfectant residuals cannot be maintained in or around the impacted area
- An inexperienced operator or individual dealing with the situation

Leaks or breaks that are repaired with clamping devices while the mains remain pressurized present little danger of contamination. Typically these are not tier 1 situations and no public notice is required.

If any of the situations exist, consult with DNR

During normal business hours call the appropriate Field Office and determine if a Tier I situation exists and requires public notice. After hours, call the 24 hour emergency response hotline. If public notice is required, determine:

- The extent and method of distribution (door hanger, hand delivery, phone, press release, etc.)
- The notification must include critical users (nursing homes, hospitals, schools, wet industries, etc.)
- The content of the notice

There is no federally mandated language

Determine if the advisory is a boil or bottled water advisory

Systems with Nitrate above 7 mg/L, should use a bottled water advisory due to the potential to increase the nitrate levels to above the MCL with boiling

Determine if a “No Use” or water conservation advisory should be issued

The advisory must remain in place until absent (clean) bacteria sample results are received.

AWWA Standard C651, Disinfecting Water Mains

AWWA Standard C651 must be followed for repair of all main breaks. The standard includes the minimum procedures for disinfection of new mains and repaired mains; there are differences in the procedures.

Elements of AWWA C651 related to main repairs which are not repaired under a pressurized situation (live)

It is very important to keep mud and dirty water out of the pipe. Disinfect the trench if needed, swab pipes and fittings with 1% chlorine solution, flush the line, disinfect the pipe if possible, and collect bacteria samples. Bacteria sampling must continue daily until two consecutive absent samples are obtained from the same locations. Properly dispose of chlorinated water used for disinfection and/or flushing.

Lifting a boil advisory, consult with DNR

Consult with the DNR Field Office before lifting the advisory. All who were contacted initially must be informed when the advisory is lifted.

DNR Field Office Contact Numbers

FO1 (Manchester) 563-927-2640

FO2 (Mason City) 641-424-4073

FO3 (Spencer) 712-262-4177 or 712-732-8350

FO4 (Atlantic) 712-243-1934

FO5 (Des Moines) 515-725-0268

FO6 (Washington) 319-653-2135

After Hours Emergency Response Hotline: 515-281-8694 (beginning 7/1/2015, new number: **515-725-8694**)

Before you have a situation

Before you have a situation, develop a communication plan to include public notice templates, identification of critical users and their contact information, identify a primary contact, partner with trusted experts and agencies, and know your media contact info including after hours contact information.